REMARKS

Reconsideration and further prosecution of the above-identified application are respectfully requested in view of the amendments and discussion that follows. Claims 1-14 are pending in the prior application.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 2 and 13 have been rejected under 35 U.S.C. §103(a) as being obvious over U.S. Pat. No. 6,730,025 to Platt in view of U.S. Pat. No. 5,891,045 to Albrecht et al. In view of the content of the claims as presently amended, applicant respectfully traverses these rejections.

Independent claim 1 has been amended to more clearly claim the invention in the context described in the specification. Support for "digital signal processor with a plurality of programmable filters specifically adapted to filter the twelve lead electrocardiogram signal under control of the central processing unit" may be found within FIG 2 which specifically shows a digital signal processor 74 that contains a notch filter 102, a baseline sway filter 98 and a high frequency filter processor 100. The programmability of the baseline sway filter 98 is discussed in par. [0023] of the specification.

The Examiner asserts that "The acquisition unit (1) comprises a digital signal processor (col. 4@45-50) adapted to filter the electrocardiogram signal" (Office Action of 12/7/05, page 2). However, col. 4, lines 45-50 of Platt merely refers to analogue to digital converter (ADC) 12. As would be abundantly clear to those of skill in the art, the digital signal processor 72 of the claimed invention is

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not the same as the Platt ADC 12.

Attached to this Response is a definition of a digital signal processor from Newton's Telecom Dictionary (21st Ed.). As may be noted, "a digital signal processor is . . . a semiconductor device that processes very efficiently and in real time a stream of digital data that is sampled from analog signals". In contrast to the processing of digital data, the Platt ADC 12 merely creates digital representations of data.

FIG. 2 of the specification shows a comparable ADC 82 connected to the digital signal processor 74. In this regard "Within the ADC 82, the analog signal of each lead is converted into a digital representation of the signal" (specification, par. [0017]). Since ACDs merely convert analog signals to digital representations, there is no processing of a stream of digital data within an ADC.

Further, the Platt ECG amplifier could not provide the functionality provided by the digital signal processor of the claimed invention. For example, "muscle tremor may have some of the same high frequency characteristics of the relative small high frequency components of the ECG" (specification, par. [0025]). The use of programmable filters allows filtering to be adapted to the characteristics of the patient, which is something that Platt cannot accomplish.

Albrecht et al. also fails to provide any teaching or suggestion of a digital signal processor or of programmable filters within an acquisition unit. Neither of the references provide any teaching or suggestion of a digital signal processor operating under control of the central processing unit. Since the combination of Platt and Albrecht et al. fail to provide any teaching or suggestion

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of at least these claim elements, the combination fails to teach or suggest each and every claim limitation. Since the combination fails to teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

Claims 3 and 4 have been rejected under 35 U.S.C. §103(a) as being obvious over Platt in view of Albrecht et al. and U.S. Pat. No. 5,876,351 to Rhode. However, Rhode suffers from the same deficiency as Platt and Albrecht et al. More specifically, Rhode is limited to a Nintendo Game Boy and Game Boy cartridge. Rhode fails to provide any teaching regarding a digital signal processor with programmable filters. Since the combination of Platt, Albrecht et al. and Rhode fail to provide any teaching regarding a digital signal processor with programmable filters, the combination fails to teach or suggest each and every claim limitation. Since the combination fails to teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

Claim 5 has been rejected under 35 U.S.C. §103(a) as being obvious over Platt in view of Albrecht et al. and U.S. Pat. No. 6,292,692 to Skelton et al. However, Skelton et al. is directed to a medical treatment device which functions under pass code control. Skelton et al. fails to provide any teaching or suggestion of a digital signal processor and certainly no teaching or suggestion of programmable filters.

As such, the combination of Platt, Albrecht et al. and Skelton et al. fail to teach or suggest each and every claim limitation. Since the combinations fail to teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

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Claims 6-11 and 14 have been rejected under 35 U.S.C. §103(a) as being obvious over Platt in view of Albrecht et al. and U.S. Pat. No. 6,141,584 to Rockwell et al. However, Rockwell et al. is directed to a defibrillator. Rockwell et al. fails to provide any teaching or suggestion of a digital signal processor with programmable filters.

As such, the combination of Platt, Albrecht et al. and Rockell et al. fails to teach or suggest each and every claim limitation. Since the combination fails to teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

Claim 12 has been rejected under 35 U.S.C. §103(a) as being obvious over Platt in view of Albrecht et al. and U.S. Pat. No. 5,873,838 to Mogi. However, Mogi is directed to sensitivity setting devices. Mogi fails to provide any teaching or suggestion of a digital signal processor with programmable filters.

As such, the combination of Platt, Albrecht et al. and Mogi fails to teach or suggest each and every claim limitation. Since the combination fails to teach or suggest each and every claim limitation, the rejections are believed to be improper and should be withdrawn.

Claims 1, 2 and 13 have been rejected under 35 U.S.C. §103(a) as being obvious over Platt in view of Albrecht et al. and U.S. Pat. No. 6,773,396 to Flach et al. In view of the content of the claims as presently amended, applicant respectfully traverses these rejections.

The deficiencies of Platt and Albrecht et al. have been noted above. Flach et al. suffers from the same deficiencies as the combination of Platt and Carter.

In this regard, Flach et al. is limited to a telemetry system for ECG signals. Nowhere within Flach et al. is

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there any mention of a digital signal processor with programmable filters.

Since Platt, Albrecht et al. or Flach et al. and the combination of Platt, Albrecht et al. and Flach et al.) fail to teach or suggest a digital signal processor with programmable filters, the combination fails to teach or suggest each and every claim limitation. Since the combination fails to teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

Claims 3 and 4 have been rejected under 35 U.S.C. §103(a) as being obvious over Platt in view of Flach et al., Albrecht et al. and U.S. Pat. No. 5,876,351 to Rhode. However, Rhode is limited to a Nintendo Game Boy and Game Boy cartridge. Nowhere within the combination of Platt, Flach et al., Albrecht et al. and Rhode is there any teaching of a digital signal processor with programmable filters.

Since the combination of Platt, Flach et al., Albrecht et al. and Rhode fail to provide any teaching regarding a digital signal processor with programmable filters, the combination fails to teach or suggest each and every claim limitation. Since the combination fails to teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

Claim 5 has been rejected under 35 U.S.C. §103(a) as being obvious over Platt in view of Flach et al., Albrecht et al. and U.S. Pat. No. 6,292,692 to Skelton et al. However, Skelton et al. is directed to a medical treatment device with that operates under pass code control. Skelton et al. fail to provide any mention of a digital signal processor or a data acquisition module with programmable

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filters.

As such, the combination of Platt, Flach et al., Albrecht et al. and Skelton et al. fails to teach or suggest each and every claim limitation. Since the combination fails to teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

Claims 6-11 and 14 have been rejected under 35 U.S.C. §103(a) as being obvious over Platt in view of Flach et al., Albrecht et al. and Rockwell et al. However, Rockwell et al. is directed to a defibrillator. Rockwell et al. clearly fails to provide any teaching or suggestion of the use of a digital signal processor with programmable filters.

As such, the combination of Platt, Flach et al., Albrecht et al. and Rockwell et al. fail to teach or suggest each and every claim limitation. Since the combinations fail to teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

Claim 12 has been rejected under 35 U.S.C. §103(a) as being obvious over Platt in view of Flach et al., Albrecht et al. and Mogi. However, Mogi is directed to a sensitivity setting devices. Mogi clearly fails to provide any teaching or suggestion of the use of a digital signal processor with programmable filters.
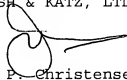
As such, the combination of Platt, Flach et al., Albrecht et al. and Mogi fail to teach or suggest each and every claim limitation. Since the combinations fail to teach or suggest each and every claim limitation, the rejections are improper and should be withdrawn.

<center>Closing Remarks</center>

Allowance of claims 1-14, as now presented, is believed to be in order and such action is earnestly solicited. Should the Examiner be of the opinion that a telephone conference would expedite prosecution of the subject application, he is respectfully requested to telephone applicant's undersigned attorney.

The Commissioner is hereby authorized to charge any additional fee which may be required for this application under 37 C.F.R. §§ 1.16-1.18, including but not limited to the issue fee, or credit any overpayment, to Deposit Account No. 23-0920. Should no proper amount be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 23-0920. A duplicate copy of this sheet(s) is enclosed.

Respectfully submitted,
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digital multiplexer A device for combining digital signals. Usually implemented by interleaving bits, in rotation, from several digital bit streams either with or without the addition of extra framing, control, or error detection bits. In short, equipment that combines several digital signals by time division multiplexing several signals into a single composite digital signal.

digital nervous system Coined by Bill Gates in 1997, the best definition of this term came from an interview between Gary Reiner, GE's chief information officer and a reporter from the Economist. According to the magazine, "Mr Reiner heads the company's most important initiative: 'digitising' as much of its business as possible. That not only means buying and selling most things online but, more importantly, setting up a digital nervous system that connects in real time anything and everything involved in the company's business: IT (Information Technology) systems, factories and employees, as well as suppliers, customers and products.

digital network A network in which the information is encoded as a series of ones and zeros rather than as a continuously varying wave—as in traditional analog networks. Digital networks have several major pluses over analog ones. First, they're "cleaner." They have far less noise, static, etc. Second, they're easier to monitor because you can measure them more easily. Third, you can typically pump more digital information down a communications line than you can analog information.

Digital Network Architecture. DNA. The data network architecture of Digital Equipment Corporation (DEC), now part of Compaq Corporation.

digital phase-locked loop A phase-locked loop in which the reference signal, the controlled signal, or the controlling signal, or any combination of these, is in digital form.

digital phase modulation The process whereby the instantaneous phase of the modulated wave is shifted between a set of predetermined discrete values in accordance with the significant conditions of the modulating digital signal.

digital plastic A fancy term for buying goods and services on-line over the Internet using your credit card, possibly in conjunction with some verification of who you are from an independent certification authority.

Digital Port Adapter DPA. A device which provides conversion from the RS-449/422 interface to the more common interfaces of RS-232-C, V.35, WE-306 and others.

Digital Private Network Signaling System See DPNSS.

Digital Pulse Origination DPO. Equipment that sends dialed digits consisting of tones or pulses. It may be used at the central office end of a DID service connection.

Digital Pulse Termination DPT. Equipment that receives and processes dialed digits consisting of tones or pulses. It may be used at the customer end of a DID service connection.

Digital Radio Broadcasting DRB. Radio transmission intended for general reception in the form of discrete, integral values.

Digital Radio Concentrator System DRCS. A digital radio system which transmits data via a device which connects a number of circuits, which are not all used at once to a smaller group of circuits for economy.

digital recording A system of recording by conversion of musical information into a series of pulses that are translated into a binary code intelligible to computer circuits and stored on magnetic tape or magnetic disk. Also called PCM - Pulse Code Modulation.

Digital Reference Signal DRS. A digital reference signal is a sequence of bits that represents a 1004-Hz to 1020-Hz signal.

Digital Selective Calling DSC. A synchanous system developed by the International Radio Consultative Committee (CCIR), used to establish contact with a station or group of stations automatically by radio. The operational and technical characteristics of this system are contained in CCIR Recommendation 493.

digital sequence spread spectrum A wireless term. An RF (radio frequency) modulation technique, which uses algorithms to code transmissions in sequential channels and then decode them at the other end.

Digital Service Cross-Connect DSX. A termination/patch panel that lets DS1 and DS3 circuits be monitored by test equipment.

digital set-top box A device that hooks up to a TV and can collect, store, and display digitally compressed TV signals. See also Digital Cable Set Top Box.

digital signal A discontinuous signal. One whose state consists of discrete elements, representing very specific information. When viewed on an oscilloscope, a digital signal is "squared." This compares with an analog signal which typically looks more like a sine wave, i.e. curvy. Usually amplitude is represented at discrete time intervals with a digital value.

Digital Signal Cross-Connect DSX. Also known variously as a DACS (Digital Access Cross-Connect System) and a DCC (Digital Cross-Connect), a DSX is a device that is used to connect digital circuits together. A DSX-1 interconnects DS-1 (T-1 or E-1) circuits, as DSX-2 interconnects DS-2 (T-2 or E-2) circuits, and a DSX-3 interconnects DS-3 circuits (T-3 or E-3).

Digital Signal Level DS-n. A hierarchical arrangement of digital signals used in North America beginning with DS0 (64 Kbps) up to DS-4 (274 Mbps).

digital signal processor A digital signal processor is a specialized semiconductor device or specialized core in a semiconductor device that processes very efficiently and in real time a stream of digital data that is sampled from analog signals ranging from voice, audio and video and from cellular and wireless to radio and television. As opposed to a general-purpose processor, a DSP is often designed to solve specific processing problems. A DSP architecture focuses on algorithmic efficiency and may use an instruction set that is more or less tailored toward the problem the DSP is solving. General purpose processors, on the other hand, may sacrifice algorithmic efficiency for general-purpose capability and push clock-speed to achieve performance. A DSP typically has much greater mathematical computational abilities than a standard microprocessor. In some applications, like wireless; PDAs and cell phones, constraints on power consumption require performance improvements other than faster clock speed. In other applications, like cellular base stations and high definition TV, where the number of channels or the high data rate require signal processing capabilities an order of magnitude greater than general purpose processors, a DSP that uses processing parallelism can provide much higher performance much more efficiently than even the fastest general-purpose processor. A DSP often performs calculations on digitized signals that were originally analog (e.g. voice or video) and then sends the results on. There are two main advantages of DSPs—first, they have powerful mathematical computational abilities, more than normal computer microprocessors. DSPs need to have heavy mathematical computation skills because manipulating analog signals requires it. The second advantage of a DSP lies in the programmability of digital microprocessors. Just as digital microprocessors have operating systems, so DSPs have their very own operating systems. DSPs are used extensively in telecommunications for tasks such as echo cancellation, call progress monitoring, voice processing and for the compression of voice and video signals as well as new telecommunications applications such as wireless LANs and next-generation cellular data and cellular Internet services . They are also used in devices from fetal monitors, to anti-skid brakes, seismic and vibration sensing gadgets, super-sensitive hearing aids, multimedia presentations and desktop fax machines. DSPs are replacing the dedicated chipsets in modems and fax machines with programmable modules—which, from one minute to another, can become a fax machine, a modem, a teleconferencing device, an answering machine, a voice digitizer and device to store voice on a hard disk, to a proprietary electronic phone. DSP chips and DSP cores in custom chips are already doing for the telecom industry what the general purpose microprocessor (e.g. Intel's Pentium) did for the personal computer industry. DSP chips are made by Analog Devices, AT&T, Motorola, NEC and Texas Instruments, among others. DSP cores are made by BOPS, DSP Group, Infineon and others.

digital signature A digital signature is the network equivalent of signing a message so that you cannot deny that you sent it and that the recipient knows it must have come from you. In short, a digital signature is an electronic signature which cannot be forged. It verifies that the document originated from the individual whose signature is attached to it and that it has not been altered since it was signed. There are two types of digital signatures. Ones you encrypt yourself and are the result of an ongoing relationship between you and the other party. Second, there are encrypted certificates issued by a company that is not affiliated with you. That company basically certifies that you are who you say you are. It does this because it's sent you a code. And it has retained a code for you, too. Join the two codes together mathematically, come up with the correct answer, and binga, it's you. Utah has a Digital Signature Program whose goal is to develop, implement and manage a reliable means of secure electronic messaging over open, unsecured computer networks, minimize the incidence of forged digital signatures and possible fraud in electronic commerce and establish standards and develop uniform rules regarding verification and reliability of electronic messages. According to Utah, "digital signatures will enable us to determine who sent a document, identify what document was sent, and determine whether the document had been altered in route. It reasonably ensures the recipient that the message came from an identifiable sender and contains a specific, unaltered message. It may be used where there needs to be sufficient confidence in the source, content and integrity of a message." www.commerce.state.ut.us/web/commerce/digsig/domain.htm.

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